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| APPLICATION NO. | F | ILING DATE | FIRST NAMED INVENTOR | | ATTORNEY DOCKET NO. | CONFIRMATION NO. | |
|-----------------|--|--------------|----------------------|---|-------------------------|------------------|--|
| 10/824,798 | 04/15/2004 | | Hiroshi Shinriki | | ASMJP.149AUS 6654 | | |
| 20995 | 7590 | 08/23/2006 | | 1 | EXAM | INER | |
| | | NS OLSON & I | ZERVIGON, RUDY | | | | |
| | 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614 | | | | ART UNIT | PAPER NUMBER | |
| | | | | | 1763 | | |
| | | | | | DATE MAILED: 08/23/2006 | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | | | | |
|--|---|-----------------------------|--|--|--|--|--|--|
| Office Action Commons | 10/824,798 | SHINRIKI ET AL. | | | | | | |
| Office Action Summary | Examiner | Art Unit | | | | | | |
| | Rudy Zervigon | 1763 | | | | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply | | | | | | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). | | | | | | | | |
| Status | | | | | | | | |
| 1) Responsive to communication(s) filed on 15 Au | igust 2006. | | | | | | | |
| ·= · · | This action is FINAL . 2b)⊠ This action is non-final. | | | | | | | |
| <i>,</i> | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is | | | | | | | |
| ,— | closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. | | | | | | | |
| Disposition of Claims | | | | | | | | |
| 4)⊠ Claim(s) <u>1-20 and 30-40</u> is/are pending in the application. | | | | | | | | |
| 4a) Of the above claim(s) is/are withdrawn from consideration. | | | | | | | | |
| 5) Claim(s) is/are allowed. | | | | | | | | |
| 6)⊠ Claim(s) <u>1-20 and 30-40</u> is/are rejected. | | | | | | | | |
| 7) Claim(s) is/are objected to. | | | | | | | | |
| <u> </u> | | | | | | | | |
| 8) Claim(s) are subject to restriction and/or election requirement. | | | | | | | | |
| Application Papers | | | | | | | | |
| 9)☐ The specification is objected to by the Examiner. | | | | | | | | |
| 10)⊠ The drawing(s) filed on <u>15 March 2006</u> is/are: a)⊠ accepted or b)□ objected to by the Examiner. | | | | | | | | |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). | | | | | | | | |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). | | | | | | | | |
| 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. | | | | | | | | |
| Priority under 35 U.S.C. § 119 | | | | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. | | | | | | | | |
| 2. Certified copies of the priority documents have been received in Application No | | | | | | | | |
| 3. Copies of the certified copies of the priority documents have been received in this National Stage | | | | | | | | |
| application from the International Bureau (PCT Rule 17.2(a)). | | | | | | | | |
| * See the attached detailed Office action for a list of the certified copies not received. | | | | | | | | |
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| Attachment(s) | | | | | | | | |
| 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) | | | | | | | | |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date | | | | | | | | |
| Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date | 5) Notice of Informal P 6) Other: | atent Application (PTO-152) | | | | | | |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 15, 2006 has been entered.

Claim Rejections - 35 USC § 102

- 2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 3. Claims 1-4, 6, 7, 9-11, 17-19, 30, 32-37, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Okase; Wataru (US 5884009 A). Okase teaches a gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) configured to be connected to an evacuatable reaction chamber (8; Figure 9; column 17, line 55 column 18, line 41) provided with a support (81; Figure 9; column 17, line 55 column 18, line 41) for placing a substrate ("W"; Figure 9; column 17, line 55 column 18, line 41) thereon, comprising: a gas-distribution head (9a-c, 85a; Figure 9; column 17, line 55 column 18, line 41) for introducing gases into the chamber (8; Figure 9; column 17, line 55 column 18, line 41) through a head surface (9; Figure 9; column 17, line 55 column 18, line 41) through a head surface (9; Figure 9) for discharging a gas through the head surface (9; Figure 9; column 17, line 55 column 18, line 41) toward the support (81; Figure 9; column 17, line 55 column 18, line 41) and a second

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section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) for discharging a gas through the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) toward the support (81; Figure 9; column 17, line 55 - column 18, line 41), said first and said second sections (9a-c,85a; Figure 9; column 17, line 55 - column 18, line 41) being isolated from each other with respect to gas mixing in the gas-distribution head (9a-c, 85a; Figure 9; column 17, line 55 - column 18, line 41), at least one (85a) of which section is coupled to an exhaust system (46,47; Figure 9; column 17, line 55 - column 18, line 41) for purging therefrom a gas present in the corresponding section without passing through the head surface (9: Figure 9; column 17, line 55 - column 18, line 41), said first (Top or upstream Z1-Z4; Figure 9) and second (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) sections being stratfied parallel to the head surface (9; Figure 9; column 17, line 55 - column 18, line 41), said second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81.82) being closer to the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) than is the first section (Top or upstream Z1-Z4; Figure 9) as claimed by claim 1

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- i. The gas-feeding apparatus (Figure 9; column 17, line 55 - column 18, line 41) according to claim 1, wherein at least the first section (Top or upstream Z1-Z4; Figure 9) is coupled to the exhaust system (46,47; Figure 9; column 17, line 55 - column 18, line 41), as claimed by claim 2
- ii. The gas-feeding apparatus (Figure 9; column 17, line 55 - column 18, line 41) according to claim 1, wherein the second section (94, 95; Figure 9 - Compare with Applicant's 2nd

- section 107 "upstream" of 1st section 81,82) is coupled to the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41), as claimed by claim 3
- iii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 1, wherein the first section (Top or upstream Z1-Z4; Figure 9) and the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) are both coupled to exhaust systems (46,47; Figure 9; column 17, line 55 column 18, line 41), respectively as claimed by claim 4
- iv. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 2, wherein the first section (Top or upstream Z1-Z4; Figure 9) reaches the head surface (9; Figure 9; column 17, line 55 column 18, line 41) through the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) without being communicated with each other with respect to gas mixing, as claimed by claim 6
- v. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 6, wherein the first section (Top or upstream Z1-Z4; Figure 9) and the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) are communicated with the head surface (9; Figure 9; column 17, line 55 column 18, line 41) through a plurality of bores (87a, 86a; Figure 9), as claimed by claim 7
- vi. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 4, wherein the first section (Top or upstream Z1-Z4; Figure 9) and the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st

section 81,82) are each disposed parallel to the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) and each separately communicated with the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) through bores (87a, 86a; Figure 9), said second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) being closer to the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) than is the first section (Top or upstream Z1-Z4; Figure 9), as claimed by claim 9

- vii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 9, wherein the bores (87a, 86a; Figure 9) communicating the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) and the head surface (9; Figure 9; column 17, line 55 column 18, line 41) are disposed predominantly in a central area of the head surface (9; Figure 9; column 17, line 55 column 18, line 41), whereas the bores (93b; Figure 9; column 17, line 55 column 18, line 41) communicating the first section (Top or upstream Z1-Z4; Figure 9) and the head surface (9; Figure 9; column 17, line 55 column 18, line 41) are uniformly distributed on the head surface (9; Figure 9; column 17, line 55 column 18, line 41), as claimed by claim 10
- viii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 10, wherein the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) has a prolonged shape in the gas-distribution head (9a-c, 85a; Figure 9; column 17, line 55 column 18, line 41), as claimed by claim

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ix. The gas-feeding apparatus (Figure 9; column 17, line 55 - column 18, line 41) according to claim 2, wherein the first section (Top or upstream Z1-Z4; Figure 9) is coupled to a source gas line (86a; "process gas") and a purge gas line (87; "purge gas"), and the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is coupled to an additive gas line (86a; "process gas") and a purge gas line (87; "purge gas"), as claimed by claim 17. Applicant's claim requirements of gas identity does not further limit applicant's pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter, 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPO 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

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The gas-feeding apparatus according to claim 1, which is connected to an evacuatable X. reaction chamber (8; Figure 9; column 17, line 55 - column 18, line 41) provided with a support (81; Figure 9; column 17, line 55 - column 18, line 41) for placing a substrate ("W"; Figure 9; column 17, line 55 - column 18, line 41) thereon, as claimed by claim 18 The gas-feeding apparatus (Figure 9; column 17, line 55 - column 18, line 41) according xi. to claim 18, wherein a space (8; Figure 9) between the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) and the support (81; Figure 9; column 17, line 55 -

column 18, line 41) is coupled to an exhaust system (46,47; Figure 9; column 17, line 55 - column 18, line 41), as claimed by claim 19

xii. A gas-feeding apparatus (Figure 9; column 17, line 55 - column 18, line 41) adapted to be connected to an evacuatable reaction chamber (8; Figure 9; column 17, line 55 - column 18, line 41) for atomic layer growth processing, comprising: a distribution plate (9; Figure 9); a first plate (9b; Figure 9) having first bores (93a; Figure 9) through which a first gas ("process gas"; Figure 9) passes, wherein a first section (Top or upstream Z1-Z4; Figure 9) is formed between the distribution plate (9; Figure 9) and the first plate (9b; Figure 9), wherein the first gas ("process gas"; Figure 9) is introduced into the first section (Top or upstream Z1-Z4; Figure 9) and passes through the first bores (93a; Figure 9); and a second plate (9c; Figure 9) having second bores (93b; Figure 9) through which a second gas ("purge gas"; Figure 9) passes, wherein a second section (94, 95; Figure 9 -Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is formed between the first plate (9b; Figure 9) and the second plate (9c; Figure 9), wherein the second gas ("purge gas"; Figure 9) is introduced into the second section (94, 95; Figure 9) - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) and passes through the second bores (93b; Figure 9), said second plate (9c; Figure 9) having third bores (center 93b; Figure 9) through which the first gas ("process gas"; Figure 9) passes, wherein connectors are provided in the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) to connect the respective first bores (93a; Figure 9) and the respective third bores (center 93b; Figure 9) through the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107

"upstream" of 1st section 81,82) without being communicated with the second bores (93b; Figure 9), wherein at least one of the first section (Top or upstream Z1-Z4; Figure 9) or the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is coupled to an exhaust system (46,47; Figure 9; column 17, line 55 - column 18, line 41) which discharges the gas in the corresponding section without passing through the corresponding section, as claimed by claim 30

- xiii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the distribution plate (9; Figure 9) is provided with a first gas ("process gas"; Figure 9) inlet (86a) disposed in a central area of the distribution plate (9; Figure 9) for introducing the first gas ("process gas"; Figure 9) into the first section (Top or upstream Z1-Z4; Figure 9), as claimed by claim 32
- xiv. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is provided with a second gas ("purge gas"; Figure 9) inlet (96) disposed in the vicinity of an outer periphery of the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), as claimed by claim 33
- xv. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the first section (Top or upstream Z1-Z4; Figure 9) is coupled to the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41), wherein the first gas ("process gas"; Figure 9) present in the first section (Top or upstream Z1-Z4;

- Figure 9) is exhausted around an outer periphery of the distribution plate (9; Figure 9), as claimed by claim 34
- xvi. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is coupled to the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41), wherein the second gas ("purge gas"; Figure 9) present in the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is exhausted through a second gas ("purge gas"; Figure 9) outlet (46, 47) disposed in the vicinity of an outer periphery of the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), as claimed by claim 35
- xvii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the second bores (93b; Figure 9) are disposed predominantly in a central area of the second plate (9c; Figure 9), as claimed by claim 36
- xviii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the first bores (93a; Figure 9) are distributed uniformly on the first plate (9b; Figure 9), and the third bores (center 93b; Figure 9) are disposed right under the respective first bores (93a; Figure 9), as claimed by claim 37
- xix. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 36, wherein the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) is coupled to the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41) and is provided with a second gas

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("purge gas"; Figure 9) inlet (96) and a second gas ("purge gas"; Figure 9) outlet (46, 47) near an outer periphery of the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), wherein the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) has a prolonged shape from the inlet to the outlet via the central area having the second bores (93b; Figure 9), as claimed by claim 40

Claim Rejections - 35 USC § 103

- 4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 5. Claims 5, 8, 12, 13, 20, 31, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okase; Wataru (US 5884009 A) in view of Hills; Graham W. et al. (US 5685914 A). Okase is discussed above. Okase does not teach:
 - i. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 2, wherein the first section (Top or upstream Z1-Z4; Figure 9) has an volume which is larger than that of the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), as claimed by claim 5
 - ii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 2, wherein the first section (Top or upstream Z1-Z4; Figure 9) comprises a central distribution inlet and a cone-shaped distribution plate extending radially therefrom, as claimed by claim 8
- iii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 9, wherein the bores (87a, 86a; Figure 9) communicating the first section (Top or

upstream Z1-Z4; Figure 9) and the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) have a total opening area on the head surface (9; Figure 9; column 17, line 55 - column 18, line 41) which is larger than that of the bores (87a, 86a; Figure 9) communicating the second section (94, 95; Figure 9 - Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) and the head surface (9; Figure 9; column 17, line 55 - column 18, line 41), as claimed by claim 12

- iv. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 9, wherein the bores (93b; Figure 9; column 17, line 55 column 18, line 41) communicating the first section (Top or upstream Z1-Z4; Figure 9) and the head surface (9; Figure 9; column 17, line 55 column 18, line 41) have an average bore size which is larger than that of the bores (86a) communicating the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82) and the head surface (9; Figure 9; column 17, line 55 column 18, line 41), as claimed by claim 13
- v. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 19, wherein the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41) for purging therefrom a gas present in the first or second section and the exhaust system (46,47; Figure 9; column 17, line 55 column 18, line 41) for evacuating the space (8; Figure 9) between the head surface (9; Figure 9; column 17, line 55 column 18, line 41) and the support (81; Figure 9; column 17, line 55 column 18, line 41) are connected and merged to a single exhaust line, as claimed by claim 20
- vi. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the first plate (9b; Figure 9) and the second plate (9c; Figure 9) are

disposed parallel to each other, and the distribution plate (9; Figure 9) has a cone shape, as claimed by claim 31

- vii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the third bores (center 93b; Figure 9) have a total opening area which is larger than that of the second bores (93b; Figure 9), as claimed by claim 38
- viii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 30, wherein the third bores (center 93b; Figure 9) have an average bore size which is larger than that of the second bores (93b; Figure 9), as claimed by claim 39

Hills teaches a wafer processing reactor (Figure 14) including a central distribution inlet (170) and a cone-shaped distribution plate (172) extending radially therefrom.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Hill's cone-shaped distribution plate to Okase's apparatus and to optimize the relative dimensions of Okase's apparatus.

Motivation to add Hill's cone-shaped distribution plate to Okase's apparatus is for confining reactant gases (column 2; lines 45-50) and to optimize the relative dimensions of Okase's apparatus. It is well established that changes in apparatus dimensions are within the level of ordinary skill in the art.(Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04).

- 6. Claims 14, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okase; Wataru (US 5884009 A) in view of Salimian; Siamak et al. (US 5656123 A). Okase is discussed above. Okase does not teach:
 - i. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 2, further comprising an RF power source for exerting RF power exclusively onto an interior of the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), as claimed by claim 14
 - ii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 14, wherein the RF power source is coupled to a bottom plate of the first section (Top or upstream Z1-Z4; Figure 9) which physically separates and insulates the first section (Top or upstream Z1-Z4; Figure 9) from the second section (94, 95; Figure 9 Compare with Applicant's 2nd section 107 "upstream" of 1st section 81,82), and the head surface (9; Figure 9; column 17, line 55 column 18, line 41) is grounded, as claimed by claim 15
- iii. The gas-feeding apparatus (Figure 9; column 17, line 55 column 18, line 41) according to claim 1, further comprising an RF power source coupled to the gas-distribution head (9a-c, 85a; Figure 9; column 17, line 55 column 18, line 41) to exert RF power onto an interior of the reaction chamber (8; Figure 9; column 17, line 55 column 18, line 41), as claimed by claim 16

Salimian teaches RF powered (12, 16; Figure 1) electrodes (34, 46) for plasma processing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Salimian's RF power source to Okase's apparatus.

Motivation to add Salimian's RF power source to Okase's apparatus is for conducting plasmaenhanced processing substrates as taught by Salimian (column 1; lines 6-19).

Response to Arguments

7. Applicant's arguments with respect to claims 1-20, and 30-40 have been considered but are most in view of the new grounds of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1763 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

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